

# Development & Sustainment

## 2017 – COAA BP Conference Recent Project Experience: Apprentice Sustainment at Scotford & Sturgeon Refineries



# Development & Sustainment

**Welcome & Workshop Introduction**  
**Niaz Ahmed – Workforce Development Co-Chair**



# Development & Sustainment

## Committee Members

**Mike Yorke – Co-Chair – NWR**

**Lisa Dueck – Co-Chair – Shell**

**Ron Cherlet – CLRA**

**j'Amey Holroyd – Apprenticeship and Industry Training Board Chair**

**Joe Gheran – Suncor**

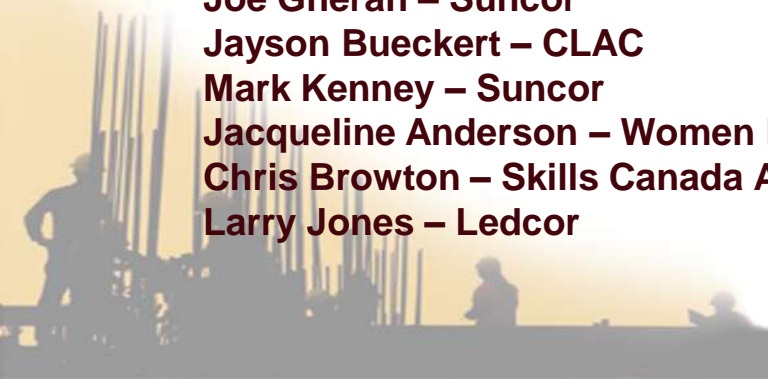
**Jayson Bueckert – CLAC**

**Mark Kenney – Suncor**

**Jacqueline Anderson – Women Building Futures**

**Chris Browton – Skills Canada Alberta**

**Larry Jones – Ledcor**



# Development & Sustainment

## Special Thanks to Invited Guests

**Paul Fisher – Shell**

**Bob Collins – BuildForce Canada**

**Adam Cywinski – BuildForce Canada**



# Development & Sustainment

## Workshop Objectives

- **Overview of Shell Turnaround Partnership Tripartite Program –  
Apprentice Utilization**
- **Update on BuildForce Proposal - Alberta Construction Labour Market  
and Apprenticeship Requirements Analysis**
- **Update on D&S Committee activity, including survey results and path  
forward**





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# Shell Albian Sands & Scotford Turnarounds

## Using Apprentices During Turnarounds

Paul Fisher  
Turnaround Manager



## Summary

- Safety Moment!
- How Shell is working to create a caring and collaborative atmosphere to improve using a tripartite approach.
- Shell's Turnaround Partnership Tripartite program is about how we work together to improve safety, quality, and productivity.

## Shell Tripartite

- Tri-partite formed which includes Shell, BT and Contractors to improve Site Safety
- Steering team and implementation team developed to oversee the process
- First rollout began at Scotford in February 2011
- Initiative includes: Leadership team session, site walks, Dialogue sessions, action lists and follow up
- Shell Turnaround Partnership group started in 2012 to align on resourcing needs and turnaround improvement (Safety, Logistics, Quality)







## Tripartite Initiative

### **What does our ideal collaborative culture look like?**

- Great teams
- Open and honest communication
- Solid planning - proactive
- Common goals
- Safety is part of everything we do
- We are professional and learning is valued
- Standardized practices
- Consistent rules which apply to all parties



# Apprentices

## History

- Less than 20% apprentices used during turnaround
- Mostly 3rd and 4th years
- Stigma associated with bringing more apprentices (cost, safety, quality, availability)

## Challenge

- Down turn in economy impacted traditional opportunities
- Impact to our future work force

## Opportunity

- Retest using apprentices during turnarounds
- Use Tripartite approach to understand opportunities/limitation
- Expand the envelop (pre apprentice and all years)
- Individual commitments as to what each group (Contractors/Halls) are willing to achieve



# Results

## Numbers

- 394 apprentices
- Achieved over 29% total of work force, ranges from 11% to 44% by Contractor/Hall

## Impact

- No safety, quality or productivity issues
- Positive feedback by contractors, journeymen and apprentices

## Feedback

- Individual apprentices asked to complete an anonymous survey
- Data review at post turnaround Tripartite meeting
- Opportunities to improve identified and applied to this Falls turnarounds

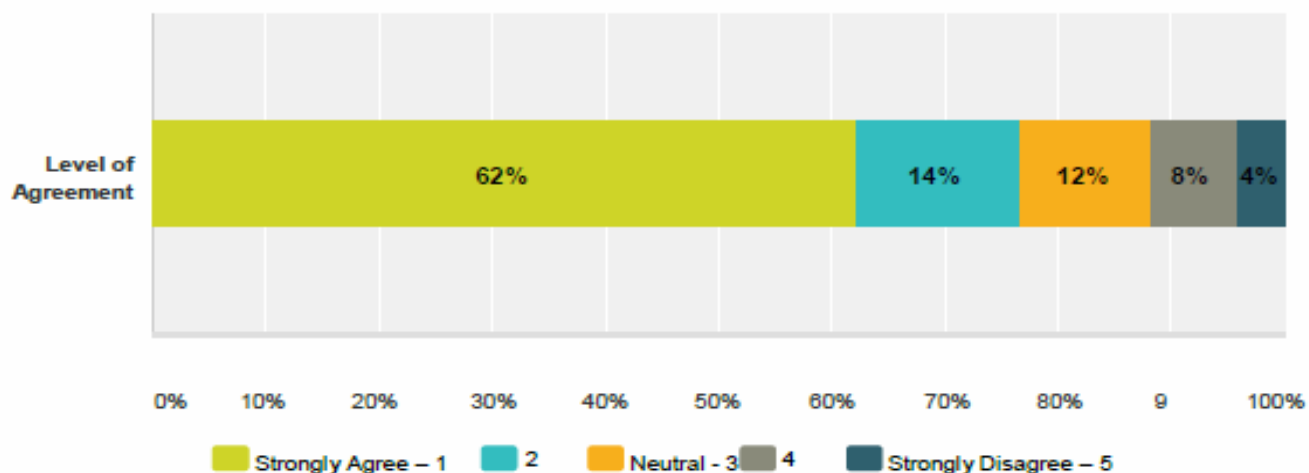


## Feedback from the Workers

- Good learning experience inside of towers. Great co-workers, very welcoming
- Thank you for the work opportunity
- I like how relatively clean Scotford is compared to other job sites
- Enjoyed working at Shell Scotford. Great site, a lot of nice people that seem to actually care about our safety. Very accommodating.
- I feel safe and confident at Shell Scotford!
- Everyone has been loads of help and is always willing to lend a hand
- I think safety is a big part of the culture at Shell. A bit more responsibility should be given to those that show initiative.
- Major focus on safety, emphasized @ each tool box by foreman. Clear direction on job scope with good follow up throughout the day. Great experience working on exchangers.
- The majority of people I worked with were good, hard working people and very helpful and inclusive in their work details and trades knowledgeable.
- Good environment to work in, good foreman and safe.
- I had a really good time at Shell Scotford, the foreman was really good and helpful, really respectful towards us the apprentices. All the tradesman treated us really good. Will definitely work here again.
- I felt this was the cleanest site I have been in, made working much easier.

## Q9 I have been assigned “meaningful” work (tasks relating to my trade) often enough so I could learn my trade.

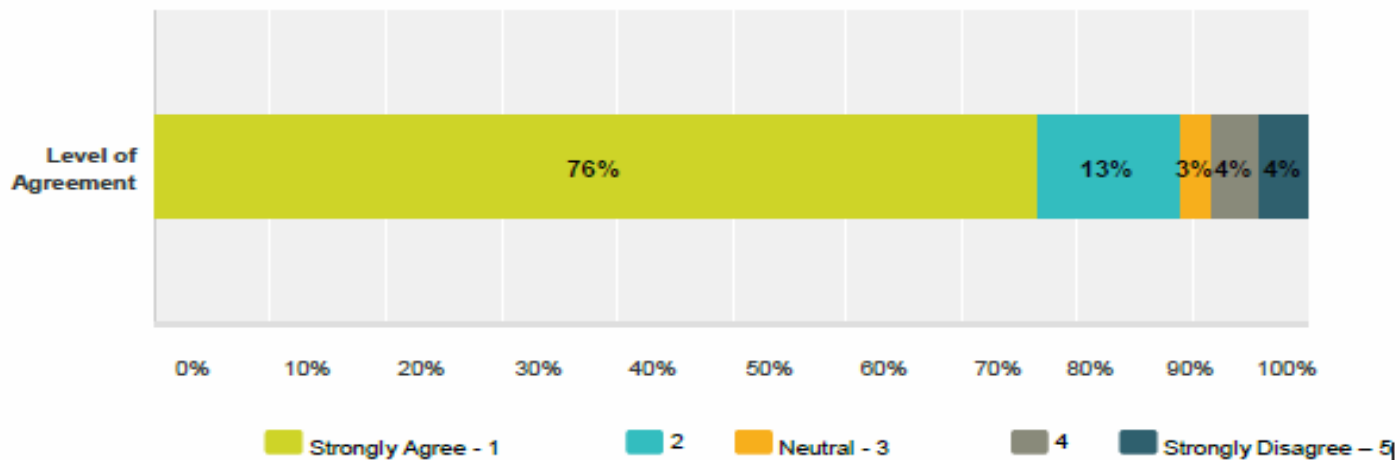
Answered: 119 Skipped: 0



	Strongly Agree 1	2	Neutral - 3	4	Strongly Disagree - 5	Total	Weighted Average
Level of Agreement	62% 74	14% 17	12% 14	8% 9	4% 5	119	1.77

## Q10 I feel included and welcomed as a part of my crew.

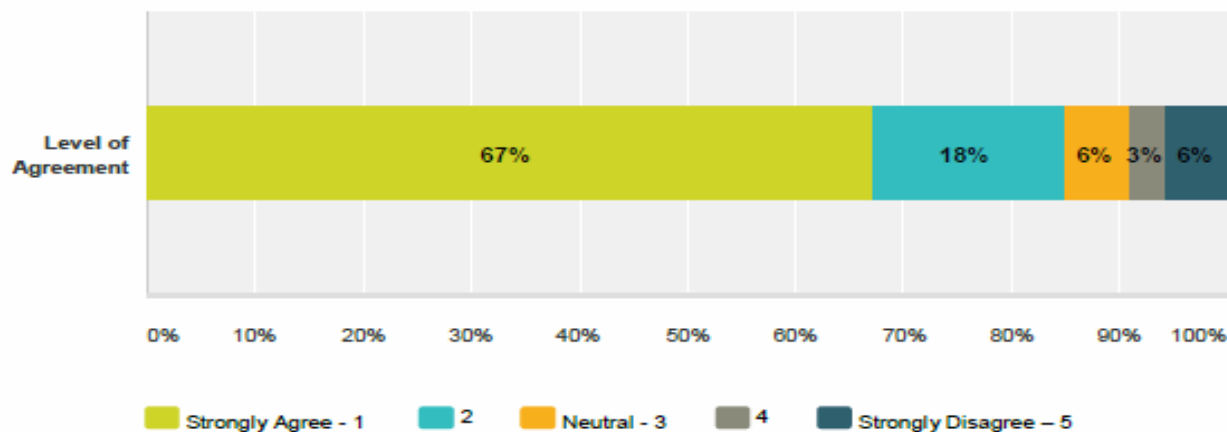
Answered: 119 Skipped: 0



	Strongly Agree (1)	(2)	Neutral (3)	(4)	Strongly Disagree (5)	Total	Weighted Average
Level of Agreement	76% 91	13% 15	3% 3	4% 5	4% 5	119	1.47

## Q14 The work I have done will help me complete my apprenticeship.

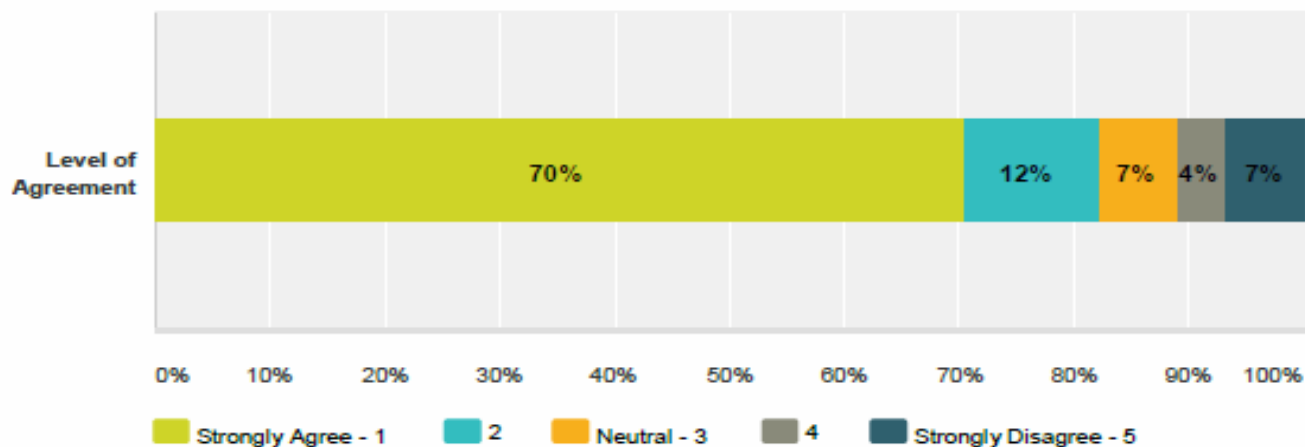
Answered: 119 Skipped: 0



	Strongly Agree (1)	(2)	Neutral - (3)	(4)	Strongly Disagree - (5)	Total	Weighted Average
Level of Agreement	67% 80	18% 21	6% 7	3% 4	6% 7	119	1.63

## Q15 The call I was dispatched to was what I expected.

Answered: 118 Skipped: 1

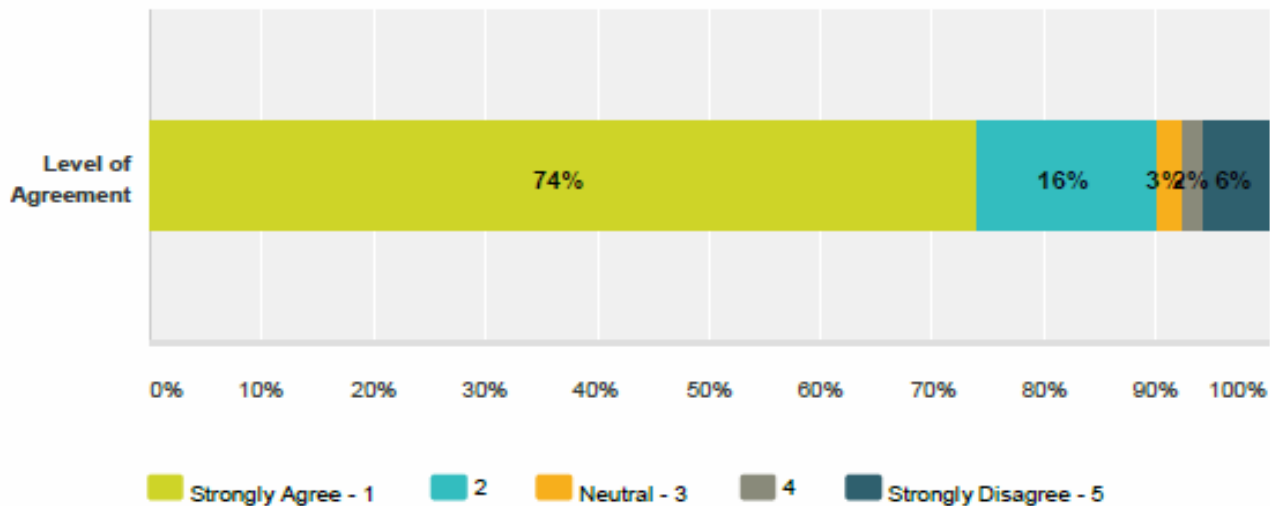


	Strongly Agree - (1)	(2)	Neutral - (3)	(4)	Strongly Disagree - (5)	Total	Weighted Average
Level of Agreement	70% 83	12% 14	7% 8	4% 5	7% 8	118	1.65



## Q17 I feel safe working on this site.

Answered: 119 Skipped: 0



	Strongly Agree - (1)	(2)	Neutral - (3)	(4)	Strongly Disagree - (5)	Total	Weighted Average
Level of Agreement	<b>74%</b> 88	<b>16%</b> 19	<b>3%</b> 3	<b>2%</b> 2	<b>6%</b> 7	119	<b>1.50</b>

# Boilermakers

- De-blinding / blanking
- De-blinding, closing manways, grinding (buffing)
- Exchangers vertical / horizontal
- Flanges/confined work space
- Heat exchangers
- Man watch / South Park watch
- Man watch grinding, buffing, hot bolting, blinding, housekeeping
- Man watch, RHC
- Man watch & spark watch & bottle watch
- Man watch on heat exchangers (vessel... care for the safety of others and provide safe environments in their confined spaces
- Man watch / fire watch / bottle watch
- working with the crew on the vac tower as well as helping out with others
- On reactors / man watch
- Prepping exchangers & furnaces for maintenance
- Man watch, spark watch and bottle water
- Cutting out caps and tubes out of reactor 202
- Reactor work, cutting, grinding, punching tubes, man watch
- Remaining trays from a reactor, blinding vessels and remaining coke from vessels
- Removing old gasket on heater doors and installing new gasket
- Rig assist, tray work in reactor tower
- Rig technician 3 red seal/journeyman. The whole crew is helping me learn
- Rigging, blinding, de-blinding, confined space, work inside vessels
- Safety confined space man watch
- Same as everyone, told what to do and help around
- Servicing furnace, convection units, blinding, de-blinding, buffing, cleaning vessels, rigging, exchangers, Towers
- Short term maintenance / shutdown
- Top rigger / material handler/vac tower work
- Vac Tower internal refurbishing
- Vessel entry/rig assist/blinding/De blinding
- Working in HOS & Towers assembling & blinding/De-blinding
- Working on heat exchanger
- Working on V-04 doing packing

# Pipefitters

- Rigging
- Rigging, hydro tests, welding assisting, flange management
- Current work assignment involves bolt up, rigging, reinstate pipe and valves
- Rigging/grinding/taking measurements
- Rigging, torqueing, installing valves and spools, de-blinding
- Fitting, rigging, grinding, cutting
- Installing valves and fire element (torqueing & rigging)
- Installing fitting spools & flanges, rigging in spools
- Rigging, bolt up helping welders, grinding hydro testing
- Blind & de-blind flanges, installing valves, build headers for nitrogen connection.
- Participate in hydro testing. Rigging with crane.
- RHC upgrader turnaround 2016 spring
- Cold cutting, tensioning, torqueing, rigging weld tilting
- Weld neck hydro
- Torque tension bolts, cold cuts, worked with multiple journeyman
- De-tensioning, hydrostatic
- Shut down/turnaround (repairs, service)
- Install / remove RV's/Valves
- RHC Turnaround, bolting, unbolting, rigging, torqueing
- Hydro tests, bolt up, cold cutting, rigging out/in spools
- Rigging, crane lifts and Install valves and spools
- Blinding / RV's
- Valve removed - reinstatement decon piping, blinding & de-blinding
- Torqueing and tensioning
- Torqueing and tensioning, hydro testing, machining pipes



# Welders

- Blinding / de-blinding / cleaning welds in vessels
- Blinding, de-blinding, job setup, filing out, FLRA, flagging
- De-blinding the Hoss
- Man watch and grinding, punching tubes with other prep work on the reactors.
- OPS assistant
- Blinding, entering vessels and towers, buffing areas for inspection and opening/closing manways
- Plant shutdown
- Reactor
- RHC Maintenance
- Striper Tower
- Vessels, confined space, blinding, de-blinding rigging, bolting tensioning & torqueing



# Electricians

- I was the step observer for the TA
- Install & Re-install EHT, Temp power
- Install/remove EHT & temp power
- Installation of new EHT on (piping/valves/flanges)
- Installing/removing heat trace, temp power & lighting.
- Remove/Install heat trace & temp power
- Shutdown, temp power, Install/remove heat trace, fire watch for EHT splicing
- Temp power EHT install
- Temp power support, remove/install EHT
- Temp power, EHT install



## Closing

- Increasing use of apprentices can be done during a turnaround without impacting:
  - Safety
  - Quality
  - Productivity
  - Cost/Schedule
  
- Positive work experience can be provided to the apprentice to help build a future work force!



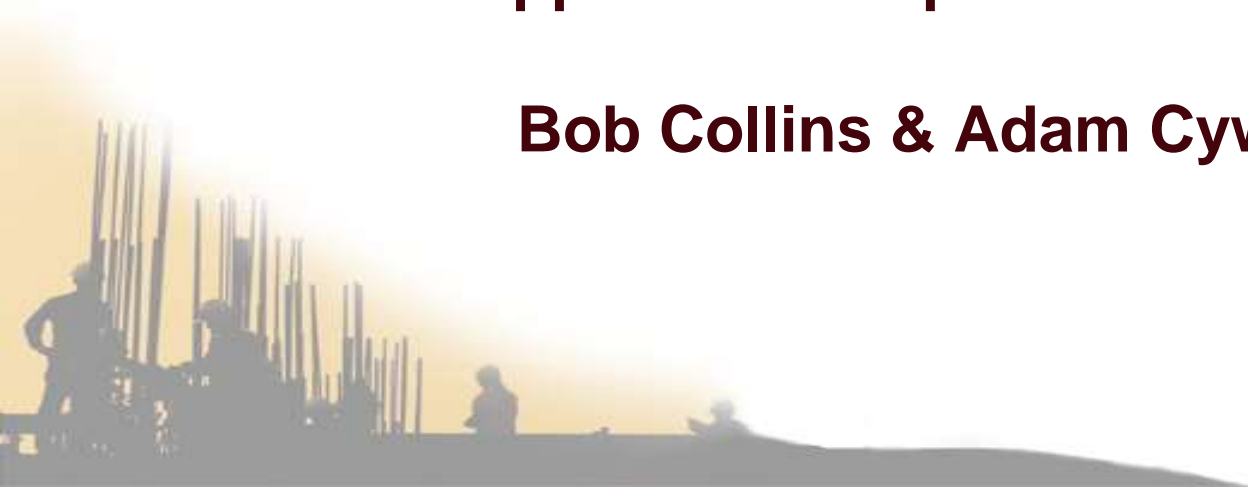


# Development & Sustainment

**BuildForce Canada**

**Alberta Construction Labour Market and  
Apprentice Requirements Analysis**

**Bob Collins & Adam Cywinski**





## Committee Update

- **Committee Charter**
- **Survey Results**
- **Path Forward**



# Development & Sustainment

## Committee Charter

### Development and Sustainment

- Trade skill development
  - Apprentices
  - Journeymen
- Leadership development
  - Mentoring, coaching, training
- Address retention issues and changing workforce demographics
- Maintain enrollment
- Fuel Your Career
- Promoting ICCS

## Survey Results

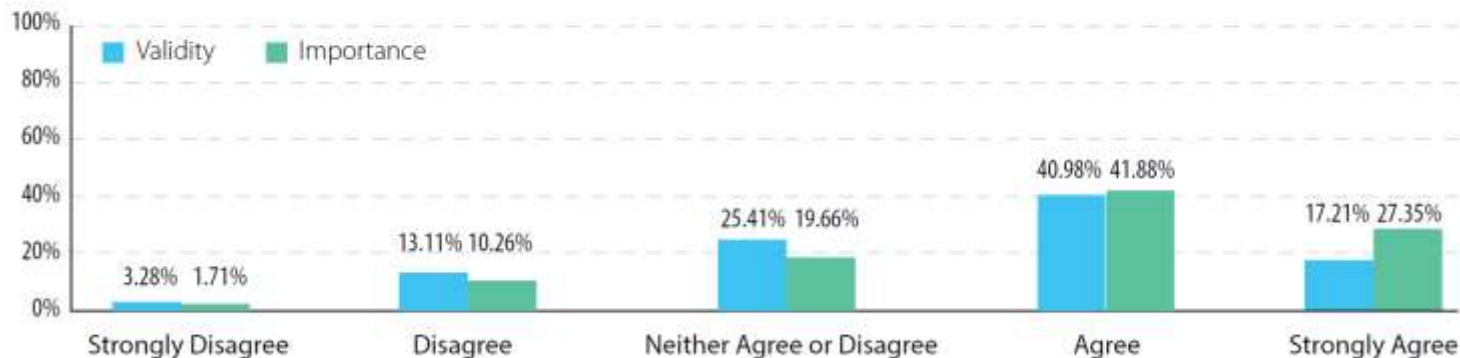
- **132 Respondents**

Q1. Please indicate what type of organization you work for.

Owner	26
Engineering/Design	2
Construction Contractor	55
Labour Provider	30
Industry Association	4
Other (please specify)	15

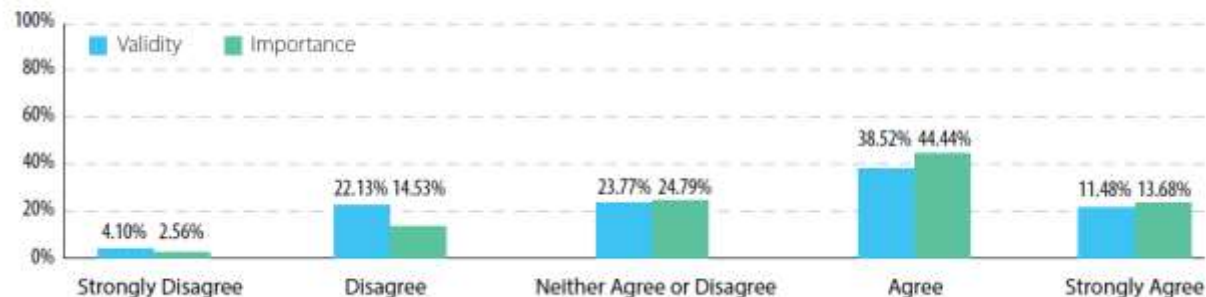
## Survey Results

Q10. Apprentice retention is monitored and managed within our organization.



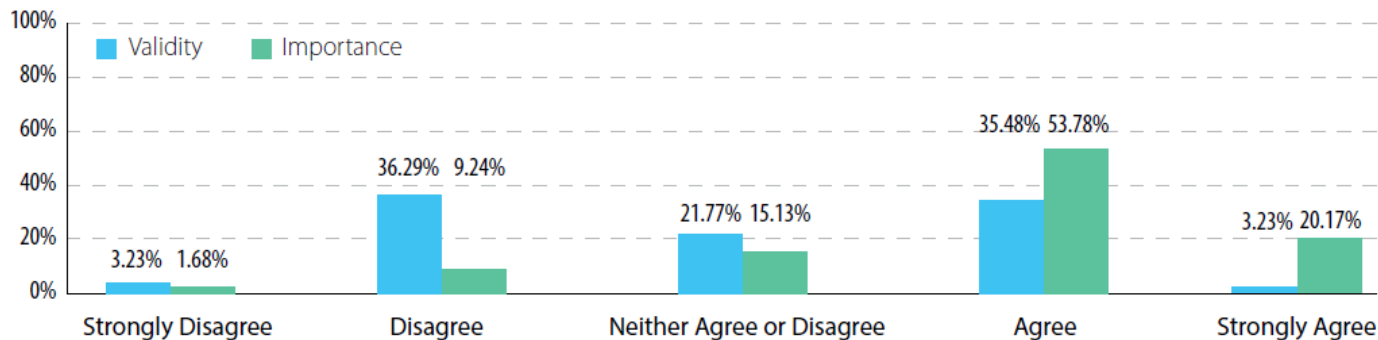
## Survey Results

Q11. The amount of time it takes an apprentice to complete their apprenticeship is monitored and managed within our organization.



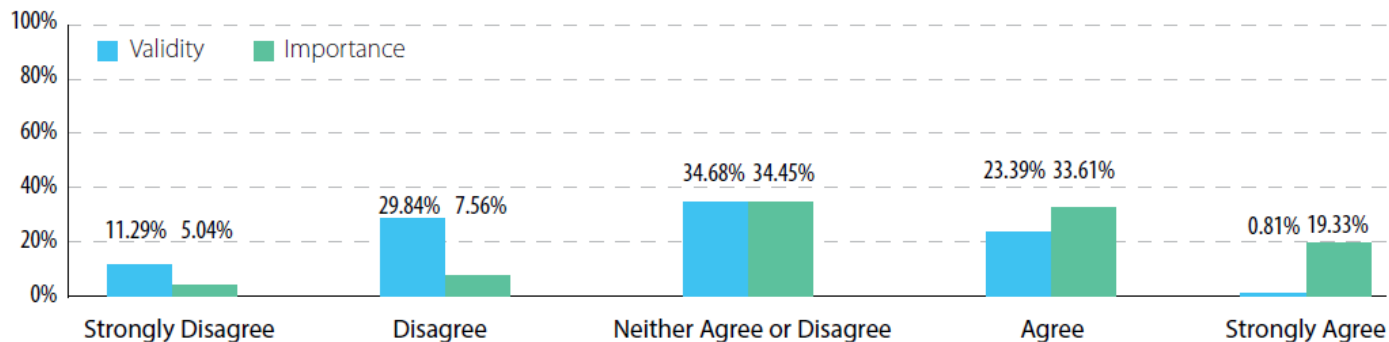
## Survey Results

Q12. The construction industry is proactive in creating apprentice opportunities.



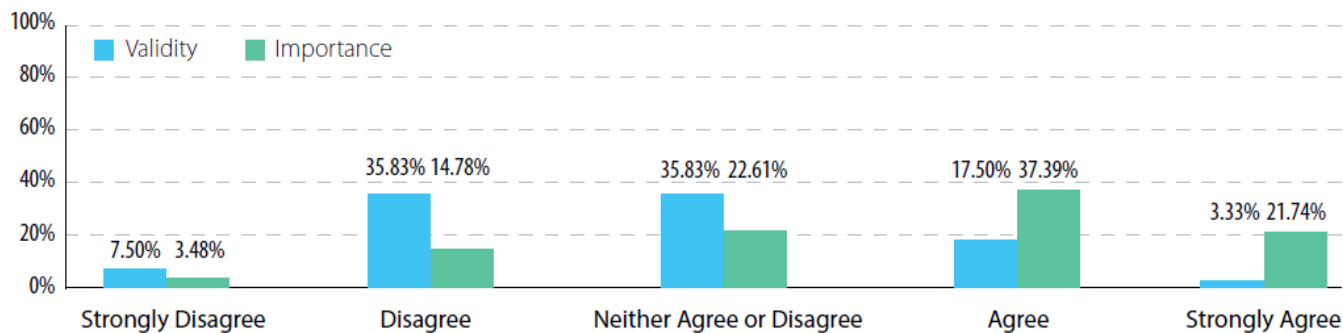
## Survey Results

Q13. The maintenance industry is proactive in creating apprentice opportunities.



## Survey Results

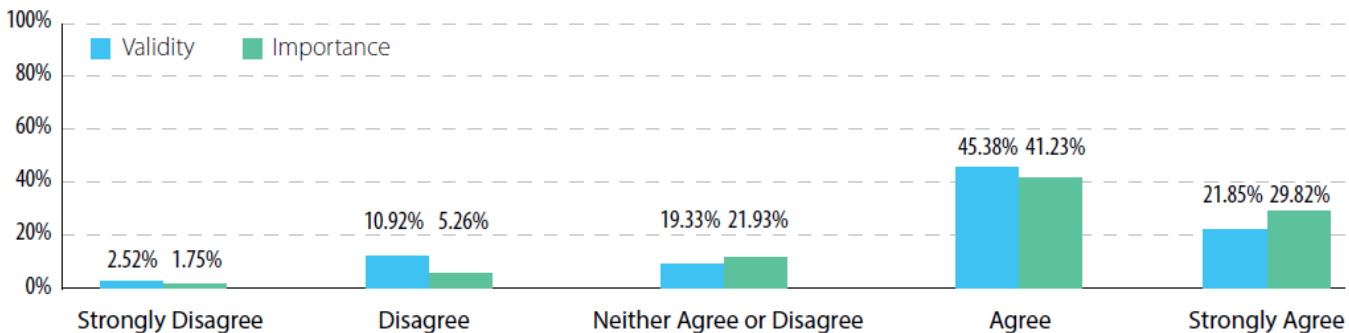
Q19. Industry has created and is comfortable with the succession plans for future leadership change.





## Survey Results

Q21. My organization is well versed in the requirements to obtain Industrial Construction Crew Supervisor certification from Apprenticeship and Industry Training.



# Development & Sustainment

## Path Forward

- Review BF findings – make available to necessary stakeholders
- Measure value of BF findings – perhaps follow up survey
- Revisit ICCS Tripartite approach & strengthen industry communication model
- Is there a need for an Apprentice Utilization BP based on Shell's model?

